

AMENDMENTS TO THE CLAIMS

Listing of Claims:

1. (Currently amended) A method for the fermentative production of ~~at least one sulfur-containing fine chemical~~ L-methionine, which comprises the following steps:
 - a) ~~fermentation fermenting in a medium cells~~ of a coryneform bacteria culture ~~bacterium~~ for producing ~~the desired sulfur-containing fine chemical~~ L-methionine, the coryneform bacteria expressing at least one heterologous nucleotide sequence which codes for a protein with methylenetetrahydrofolate reductase (metF) activity, ~~wherein said heterologous nucleotide sequence comprises a nucleotide sequence encoding a metF protein having an amino acid sequence as set forth in SEQ ID NO: 2 or comprises a nucleotide sequence encoding a metF protein having an amino acid sequence with 95% homology or more to the sequence as set forth in SEQ ID NO: 2;~~
 - b) ~~concentration of the sulfur-containing fine chemical~~ concentrating L-methionine in the medium or in the bacterial cells, and
 - c) ~~isolation of the sulfur-containing fine chemical~~ isolating L-methionine.
- 2-4. (Cancelled).
5. (Currently amended) A The method as claimed in claim 1, wherein the metF-encoding sequence comprises a coding sequence ~~according to~~ as set forth in SEQ ID NO:1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51 and 53 ~~or a nucleotide sequence homologous thereto which codes for a protein with metF activity.~~
6. (Currently amended) A The method as claimed in claim 1, wherein the metF-encoding sequence codes for a protein with metF activity, said protein comprising an amino acid sequence ~~according to~~ as set forth in SEQ ID NO:2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52 and 54 ~~or an amino acid sequence homologous thereto which represents a protein with metF activity.~~

7. (Currently amended) A The method as claimed in claim 1, wherein the coding metF sequence is a DNA or RNA which can be replicated in coryneform bacteria or is stably integrated into the chromosome.
8. (Currently amended) A The method as claimed in claim 7, wherein
- a bacteria strain transformed with a plasmid vector carrying at least one copy of the coding metF sequence under the control of regulatory sequences is used, or
 - a strain in which the coding metF sequence has been integrated into the bacteria chromosome is used.
9. (Currently amended) A The method as claimed in claim 1, wherein the coding metF sequence is overexpressed.
10. (Currently amended) A The method as claimed in claim 1, wherein bacteria are fermented in which additionally at least one further gene of the biosynthetic pathway of the desired sulfur-containing fine chemical L-methionine has been amplified or mutated overexpressed such that its activity is not influenced by metabolic metabolites.
11. (Cancelled).
12. (Currently amended) A The method as claimed in claim 1, wherein coryneform bacteria are fermented in which, at the same time, at least one of the genes selected from among
- the a lysC gene, which encodes an aspartate kinase,
 - the glyceraldehyde 3-phosphate dehydrogenase encoding gene gap,
 - the 3-phosphoglycerate kinase encoding gene pgk,
 - the pyruvate carboxylase encoding gene pye,
 - the triose phosphate isomerase encoding gene tpi,
 - the homoserine O-acetyltransferase encoding gene metA,
 - the cystathionine gamma-synthase encoding gene metB,
 - the cystathionine gamma-lyase encoding gene metC,
 - the serine hydroxymethyltransferase encoding gene glyA,

~~j) the O-acetylhomoserine sulphydrylase encoding gene metY;~~
~~k) the vitamin B12 dependent methionine synthase encoding gene metH;~~
~~l) the phosphoserine aminotransferase encoding gene serC;~~
~~m) the phosphoserine phosphatase encoding gene serB;~~
~~n) the serine acetyltransferase encoding gene cysE; and~~
~~o) the hom gene, which encodes a homoserine dehydrogenase;~~
is overexpressed or mutated in such a way that the activity of the corresponding proteins is influenced by metabolic metabolites to a smaller extent, if at all, compared to nonmutated proteins.

13. (Cancelled).

14. (Currently amended) A The method as claimed in claim 1, wherein microorganisms the coryneform bacterium is of the species Corynebacterium glutamicum are used Corynebacterium glutamicum.

15-16. (Cancelled).

17. (New) A method for the production of L-methionine, which comprises the following steps:

- a) fermenting in a medium cells of a coryneform bacterium for producing of L-methionine, said coryneform bacteria expressing at least one heterologous nucleotide sequence which codes for a protein with with methylenetetrahydrofolate reductase (metF) activity, wherein the heterologous nucleotide sequence comprises a nucleotide sequence having 95% identity or more to the sequence as set forth in SEQ ID NO: 1;
- b) concentrating L-methionine in the medium or in the bacterial cells; and
- c) isolating L-methionine.

18. (New) The method of claim 17, wherein the coding metF sequence is a DNA or RNA which can be replicated in coryneform bacteria or is stably integrated into the chromosome.

19. (New) The method of claim 17, wherein
 - a) a bacteria strain transformed with a plasmid vector carrying at least one copy of the coding *metF* sequence under the control of regulatory sequences is used, or
 - b) a strain in which the coding *metF* sequence has been integrated into the bacteria chromosome is used.
20. (New) The method of claim 17, wherein the coding *metF* sequence is overexpressed.
21. (New) The method of claim 17, wherein bacteria are fermented in which additionally at least one further gene of the biosynthetic pathway of L-methionine has been overexpressed.
22. (New) The method of claim 17, wherein the coryneform bacterium is of the species *Corynebacterium glutamicum*.